

Total length 560 mm. ; tail 100.

A single female specimen from Inkongo, on the Sankuru River, in the Kassai Province of the Congo, presented by Mr. H. Wilson.

Atractaspis watsonii.

Snout very short, feebly prominent. Portion of rostral visible from above half as long as its distance from the frontal; suture between the internasals shorter than that between the præfrontals; frontal as long as broad, longer than its distance from the end of the snout, as long as the parietals; one præ- and one postocular; temporals small, 2+3; six upper labials, third and fourth largest, fourth bordering the eye; first lower labial in contact with its fellow behind the symphysial; three lower labials in contact with the chin-shields. Scales in 29 rows. Ventrals 222; anal entire; subcaudals 29, mostly single (last 8 paired). Uniform black.

Total length 570 mm. ; tail 45.

A single female specimen from Sokoto, Upper Niger, presented by Mr. C. F. Watson.

XIII.—*New African Phlebotomic Diptera in the British Museum (Natural History)*. — Part III. *Tabanidæ (continued)*.
By ERNEST E. AUSTEN*.

TABANINÆ.

GENUS HÆMATOPOTA, Mg. (*continued*).

Hæmatopota copemani, sp. n.

♀.—Length (15 specimens) 9·5 to 11 mm. ; width of head 2·6 to 2·8 mm. ; width of front at vertex 1 to 1·2 mm. ; length of wing 8·4 to 9·6 mm.

Yellowish grey; dorsum of thorax with four dark brown longitudinal stripes, dorsum of abdomen with a broad longitudinal dark brown stripe on each side of middle line, starting from base and usually becoming attenuated or dying away towards distal extremity, narrowly interrupted on hind margins of segments; frontal callus clove-brown †, sometimes lighter in

* For Parts I. and II. see Ann. & Mag. Nat. Hist. ser. 8, vol. i. pp. 209-228 and 401-428.

† For names and illustrations of colours, see Ridgway, 'A Nomenclature of Colors for Naturalists' (Boston: Little, Brown, & Company, 1886).

middle ; wings partly hyaline, with tips and a broad border to hind margin, not quite reaching axillary incision, brown with light markings ; front tibiæ dark brown, somewhat incrassate, with an ill-defined pale band near base, middle and hind tibiæ ochraceous-buff, without bands, but tips of middle tibiæ sometimes brownish.

Head: face, jowls, and central portion of front yellowish grey, sides of front olive-grey ; *frontal callus* narrow, expanding on each side and extending from eye to eye, upper margin straight, produced into an upwardly directed triangle in centre, *no dark median spot below callus* ; lateral frontal spots clove-brown or black, well-marked and conspicuous, not in contact with eyes and each surrounded with a light grey area when seen from above ; median frontal spot inconspicuous or absent ; *palpi* fawn-coloured, terminal joint moderately swollen, blunt at tip, clothed with short black hair ; first and second joints of *antennæ* reddish fawn-coloured, first joint not swollen or elongate, third joint dark brown or reddish brown, lighter at base, narrow and elongate, with upper and lower margins parallel, last three annuli clove-brown, last annulus equal in length to the two preceding annuli taken together. *Thorax* : all four dark brown stripes on dorsum often extending to hind margin, but ad-median pair sometimes suddenly becoming faint at one-third of the distance from transverse suture to hind margin ; *scutellum* with a pair of sharply defined dark brown elongate marks (continuations of the outer stripes on the main portion of the mesonotum). *Abdomen* : dorsum and venter clothed with short, appressed, pale chrome-yellow hairs ; dark brown stripes on dorsum converging towards distal extremity, and on seventh segment often in contact, each stripe composed of a series of quadrate blotches (one on each segment), which on the distal segments are usually represented only by their inner and a portion of their posterior margins ; venter with a brown median stripe ; not sharply defined. *Wings* : basal cells entirely, anal cell except distal extremity, hyaline ; discal cell and basal two-thirds of first posterior cell only a little less clear, without markings, or merely with a few faint indications of darker transverse flecks ; marginal cell as far as fork of third vein clear, except for more or less indistinct traces of two or three interrupted or semi-interrupted darker cross-bars ; outer half of rosette round fork of third vein distinct, composed of detached light marks ; light sinuous mark in tip of wing below second longitudinal vein sharply defined, as also its continuation in shape of a series of detached, sometimes semi-oblique light marks

running across posterior cells parallel to hind margin; remains of lower half of rosette round distal extremity of discal cell and sometimes also those of lower half of rosette round distal extremity of second basal cell visible above this series of marks; anal angle, a rather broad streak across axillary cell a little below the middle, and alula hyaline; *stigma* clove-brown, elongate, sharply defined and conspicuous. *Halteres* buff or cream-buff, knob seal-brown at base above and below. *Legs*: femora dusky, greyish pollinose; tarsi dark brown, first joint of middle and hind pairs except tip usually lighter (ochraceous buff).

North-western Rhodesia; type and a large number of other specimens from the Kasempa District, January 1908 (*District Commissioner E. A. Copeman*). Mr. Copeman, in whose honour I have much pleasure in naming this species, when forwarding the specimens together with seven others belonging to *Hamatopota pertinens*, Austen, and two species not yet determined, wrote that these flies are "an awful pest in the early rainy season; their bites cause irritation and swelling, but I have not heard that they carry any known disease-germs."

Hamatopota copemanii belongs to a group of species, other members of which are *H. similis*, Ricardo, *H. unicolor*, Ricardo, *H. denshamii*, Austen, and *H. laverani*, Surcouf, and to which *H. pertinens*, Austen, is somewhat more distantly allied. From all of those mentioned the new species is distinguished by the absence of the median spot below the frontal callus. It agrees with *H. similis* and *H. denshamii* in the pattern of the wing-markings, but differs from both in the lighter coloration of the pollinose covering of the body, in the light area in the wings being more hyaline (therefore presenting a greater contrast to the dark border, in which the light markings are more sharply defined), and especially in the basal cells being entirely hyaline. *H. copemanii* differs from *H. denshamii* in the frontal callus being less deep, and from *H. similis* in the palpi being more slender and paler. From *H. laverani* (Congo Free State) *H. copemanii* is distinguished by the frontal callus being slightly shallower on each side of the middle line, the light area in the wings and the light wing-markings being more hyaline, the first and second costal cells being darker, and the *stigma* being distinctly longer and darker. The colour of the frontal callus and the much smaller first joint of the antenna will suffice to distinguish *H. copemanii* from *H. unicolor*, Ricardo.

Hæmatopota masseyi, sp. n.

♀.—Length (1 specimen) 8·5 mm.; width of head 2·5 mm.; width of front at vertex 1 mm.; length of wing 8·2 mm.

Grey; dorsum of thorax French grey, with four olive-coloured longitudinal stripes; abdomen yellowish grey, dorsum with a pair of quadrate dark brown blotches on each segment commencing with second, partly obsolete on fourth segment and almost obsolete on subsequent segments, venter with a very broad dark brown longitudinal stripe extending from base to tip; frontal callus shining black; wings hyaline, except costal cells and a light brown border, which contains light markings and, commencing on costa about 1 mm. before end of second vein, includes tip and extends nearly to anal angle; legs dark brown, under side of hind femora pearl-grey, front tibiæ hardly incrassate, with a very indistinct lighter band near base, middle and hind tibiæ each with two more or less inconspicuous reddish-brown bands.

Head: front, except vertex, silvery grey when viewed from above, face and jowls yellowish grey, a clove-brown elongate fleck on each side of face, running from lower inner angle of eye to antenna; frontal callus of moderate depth, extending from eye to eye, its upper margin straight in middle, then curving downwards on each side, lower margin with a wide median indentation; a narrow clove-brown median fleck below callus reaching to level of antennæ; lateral frontal spots large, clove-brown, subtriangular, not in contact with eyes, median frontal spot absent in typical specimen; palpi mouse-grey, terminal joint elongate, clothed with short yellowish hairs intermixed with some blackish ones; first and second joints of antennæ mouse-grey, third joint wanting, first joint short, not incrassate, sparsely clothed above with yellowish hairs. Thorax: dorsum sparsely clothed with short yellowish hairs, inner pair of stripes terminating beyond transverse suture at about one-third of distance between latter and hind margin; a narrow stripe above base of each wing and a spot at bottom of mesopleuræ olive-coloured; scutellum uniform grey, without spots. Abdomen clothed with short appressed yellowish hairs; dark brown blotches on dorsum not extending to hind margins of segments. Wings: both basal cells, marginal cell to a distance of nearly 1·2 mm. beyond distal extremity of stigma, basal half of anal cell, and anal angle hyaline; first submarginal cell as far as fork of third vein, first posterior cell to about

same level, and discal cell also hyaline, with exception of a few faint darker clouds along the veins, and in case of discal cell vestiges of two or three faint and interrupted darker transverse markings; light markings in light brown border of tip and hind margin coarse, tending to become confluent; usual sinuous light mark near tip of wing clearly defined, in contact above lower branch of third vein with remains of outer portion of periphery of distal rosette; usual series of oblique light markings running across posterior cells; light flecks on hind margin of wing in distal angles of axillary and second and third posterior cells, faint vestiges of similar flecks in distal angles of fourth and fifth posterior cells; rather more than basal half of axillary cell hyaline, except a faint darkish spot near proximal angle and a broad transverse dark mark, which starts from middle of sixth longitudinal vein and does not reach anal angle; appendix to fork of third vein long; *stigma* long, clove-brown, conspicuous. *Halteres* brownish, knob seal-brown at base above and below. *Legs*: middle and hind tibiae clothed with short, appressed, yellowish hair; first joint of middle and hind tarsi lighter at base.

Congo Free State: Katanga District, valley of the Lualaba River, between 9° and 10° 40' S. lat., Jan. 1907 (*Dr. A. Yale Massey*).

I have much pleasure in naming this prettily marked species in honour of its discoverer, who, by his energy as a collector while acting as Medical Officer to Tanganyika Concessions, Ltd., considerably enriched the National Collection, and made many additions to our knowledge of the blood-sucking Diptera of the south-eastern corner of the Congo Free State.

Hæmatopota masseyi belongs to the same group as the foregoing species; it can be distinguished from all the described species of this group by the large hyaline space in the wing, next the costa and beyond the stigma.

Hæmatopota divisapex, sp. n.

♀.—Length (3 specimens) 8.25 to 9 mm.; width of head 3 to 3.25 mm.; width of front at vertex 1 mm. to just over 1 mm.; length of wing 8 mm.

Brown; thorax mummy-brown, with grey longitudinal stripes on dorsum; scutellum fawn-coloured, greyish pollinose; abdomen clove-brown, hind margins of segments cream-buff, first and second segments ochraceous-buff on sides and beneath; frontal callus dark mummy-brown; wings dark brown with light

markings and at distal extremity a conspicuous light cross-band, which, starting from costa just beyond end of second longitudinal vein, rejoins margin a little below middle of second submarginal cell, and thus cuts off extreme tip of wing; front and hind legs clove-brown, middle legs seal-brown, front and hind tibiae each with a broad cream-coloured band at base, clothed with silvery hair, middle tibiae with two cream-buff bands.

Head: front yellowish grey, its sides nearly parallel, face and jowls smoke-grey; *frontal callus* moderately deep, extending from eye to eye, its upper margin convex, lower margin straight, close to base of antennae; seal-brown median spot below callus very small and inconspicuous, divided; lateral frontal spots rather small but conspicuous, seal-brown, in contact with or narrowly separated from eyes, median frontal spot inconspicuous or absent; *palpi* cream-buff, terminal joint rather small, tapering, clothed on outer side with short black hairs, at base and below with yellowish hair; first and second joints of *antennae* ochraceous-buff, third joint wanting, first joint 0.6 mm. in length, but very slightly incrassate, upper angle of second joint dark brown, strongly produced, first and second joints clothed with black hair. *Thorax*: dorsum, including scutellum, clothed with short yellowish hairs; front and hind margins and stripes smoke-grey, a narrow median stripe reaching hind margin and a pair of broader admedian stripes, latter terminating in a point just beyond transverse suture; hind margin with usual crescentic grey mark on each side of median stripe, with which crescentic marks are in contact; pectus, pleurae, and sides of dorsum smoke-grey, clothed with whitish hair; *scutellum* with a faint darker transverse band close to base. *Abdomen*: dorsum with a faintly indicated median grey longitudinal stripe, fourth and following segments each with a pair of more or less distinct small admedian grey spots, sides of segments greyish, clothed like hind margins with yellowish hair; venter greyish pollinose, clothed with short appressed yellowish hair. *Wings*: usual three rosettes of light markings present, although often more or less broken up into isolated spots; usual sinuous light mark near tip of wing represented by cross-band described above, which broadens out below, and is sometimes nearly straight, sometimes slightly sinuous; *stigma* distinct, dark seal-brown, with a more or less quadrate brown blotch below it, extending to third longitudinal vein; a more or less quadrate light spot next costa at each end of stigma, distal one sometimes with a dark dot in

centre ; hind margin with a series of large, conspicuous, triangular light marks, which respectively occupy distal angles of first, second, third, and fifth posterior cells ; a similar but smaller light mark in distal angle of axillary cell ; basal half of axillary cell hyaline, marked with a more or less distinct brown spot near base, and more distally with a larger or smaller offshoot from the brown colour in the second basal cell ; a series of small oblique light marks running across posterior cells, often broken up into a pair of elongate dots in each cell ; discal cell with a pair of narrow transverse light marks, sometimes interrupted, and in addition sometimes with a light spot at one or other extremity, or at both extremities ; first submarginal cell with a pair of light marks at base ; both basal cells hyaline at base, first basal cell with a transverse light mark in middle, connected along second longitudinal vein with another transverse light mark at commencement of distal third, second basal cell with a transverse light mark at end of basal third and a more or less completely closed light loop close to distal extremity ; anal cell semihyaline at base, and with a transverse light mark beyond middle ; first and second costal cells and extreme base of wing hyaline ; alula hyaline, with a darker centre. *Halteres* primrose-yellow, stalks straw-yellow. *Legs* : front tibiæ slightly incrassate ; first joints of middle and hind tarsi, except tips, cream-buff.

Congo Free State (Katanga District) : three specimens (co-types) from Ruwe, Lualaba River, *circa* 11° S., 26° E., Feb. 1906 (*Dr. A. Yale Massey*).

The conspicuous light cross-band at the tip of the wing will form a convenient guide to the identification of this species. From *Hæmatopota longa*, Ricardo (Nyasaland and East Africa Protectorates), and another species from Nyasaland, at present undescribed, the wings of which also exhibit an apical cross-band, *H. divisapex* is distinguished at once by the fawn-coloured scutellum. *H. sanguinaria*, Austen (North-western Rhodesia), in which the scutellum is somewhat similar in coloration, has no light cross-band at the tip of the wing, and owing to other characters also, such as the coloration and marking of the legs, cannot be confused with the present species.

Hæmatopota coronata, sp. n.

♀.—Length (3 specimens) 10 to 10·75 mm. ; width of head 3·25 to 3·75 mm. ; width of front at vertex 1·2 to 1·5 mm. ; length of wing 7·5 to 8·75 mm.

Dark brown, with grey markings; wings light brown, with a broad bifurcate light cross-band at the apex, and exceptionally well-marked rosettes. Frontal callus dark mummy-brown. Scutellum smoke-grey at base and beneath, with broad dark brown hind border. Abdomen seal-brown above, with sides, hind borders of segments, and a median stripe and pair of admedian spots on each segment smoke-grey. Legs clove-brown or seal-brown, middle femora fawn-coloured or brownish fawn-coloured, darker at tips; a broad band next to base on front and hind tibiae, a more or less distinct narrow band on distal half of hind tibiae, three bands on middle tibiae (including one at extreme base), and first joints of middle and hind tarsi except tips cream-coloured.

Head: front drab-grey, with an underlying brownish tinge in central region, and a pair of brown admedian flecks on vertex; face and jowls smoke-grey, upper part of face yellowish grey, with a dark brown horizontal mark on each side, running from lower inner margin of eye towards antenna; *frontal callus* relatively narrow or of only moderate depth, extending from eye to eye, upper and lower margins nearly straight or slightly undulate; a seal-brown triangular median spot extending from lower margin of callus to level of upper margin of base of antennae; median as well as lateral frontal spots conspicuous, clove-brown, lateral frontal spots in contact with eyes when viewed from below, median frontal spot situate on a grey mark like an inverted spear- or arrow-head, base of which extends to vertex; *palpi* greyish buff, clothed with yellowish-white hair, intermixed with minute black hairs on outer side of terminal joint, which is of moderate size, not sharply pointed, but little swollen at base, and slightly dusky on outer side towards tip; first joint of *antennae* shining clove-brown, greyish buff at base on inner side, elongate and strongly incrassate, with a constriction before the tip, second joint ochraceous buff, small, its upper angle but little produced, third joint dark brown, buff at extreme base, narrow and elongate, last three annuli clove-brown. *Thorax*: pectus, pleurae, and markings on dorsum as in *H. divisapex*. *Abdomen*: dorsum with sides and hind borders of segments clothed with pale yellowish hair; grey hind border of first segment expanded in middle, where it sometimes assumes a cream-buff tint; median portion of front margin of second segment smoke-grey; median stripe on second segment the broadest, in shape of a forwardly-directed triangle with its apex in contact with front margin, median stripes on following segments also sometimes expanded posteriorly; venter

smoke-grey, dark greyish brown towards tip, hind margins of segments lighter. *Wings*: usual three rosettes each consisting of about three concentric series of light marks, generally alternately expanding and contracting; rosette round fork of third longitudinal vein with an upward prolongation to costa, resulting in an elongate light mark below latter at distal end of stigma; rosette round distal extremities of basal cells abruptly truncated above by second longitudinal vein, beyond which it does not extend, though there is a subquadrate light mark at proximal end of stigma, on and below first longitudinal vein; light marks across bases of basal, anal, and axillary cells similar to those forming half of rosette round distal extremities of basal cells, supposing this rosette to be bisected by a line at right angles to longitudinal axis of wing; inner ramus of broad light cross-band at apex of wing much narrower than cross-band itself, and really consisting of the usual sinuous apical streak; it is continuous below with a series of large light blotches along hind margin of wing, at distal extremities of posterior and axillary cells; a light mark at tip of anal cell; two proximal series of marks forming rosette round distal extremities of basal cells with an extension across anal and axillary cells down to hind margin; discal cell with three more or less complete light streaks across each extremity, the two proximal streaks usually more or less confluent; *stigma* dark seal-brown, rather short but conspicuous; *alula* infuscated, but with a pale edge. *Halteres*: knob clove-brown, or clove-brown above and below, stalk cream-buff. *Legs*: hind as well as front tibiae incrassate, hind tibiae with fringe of black hair on outer side of dark portion; narrow pale band on distal half of hind tibiae sometimes well marked, sometimes scarcely visible, faint traces of a similar second band in some cases distinguishable on front tibiae also; pale band at base of middle tibiae very narrow, though broader than seal-brown band following it.

Somaliland, June 1905 (*Dr. R. E. Drake-Brockman*): three females of this species, taken in the Ogaden country, Somaliland, between the Webi Shebeli and the Web, in September 1901 (*Dr. E. Brumpt*), are in the Muséum d'Histoire Naturelle, Paris.

Hematopota coronata cannot well be confused with any of its African congeners at present known to me. While in the presence of a bifurcate light mark at the tip of the wing it agrees with *H. decora*, Walk., and *H. bullatifrons*, Austen, the sharply defined and very complete compound rosettes (not to mention other characters) are sufficient to distinguish

it from the former of these species, just as the shape of the frontal callus will prevent it from being mistaken for the latter. *H. ruficornis*, Walk., from S. Africa, which also has a bifurcate light mark at the tip of the wing, has much more diffuse rosettes, the first and third antennal joints of a very different shape, and the pair of pale bands on the hind tibia of equal width. To judge from Loew's figure of the wing, *H. duplicata*, Lw. (Cape Colony), though resembling *H. coronata* in the general appearance of the rosettes, is distinguished by the outer branch of the apical cross-band or sinuous mark being no wider than the inner, instead of quite three times as broad.

Hæmatopota inornata, sp. n.

♀.—Length (3 specimens) 11·5 to 12·3 mm.; width of head 4 to 4·2 mm.; width of front at vertex just over 1 mm.; length of wing 12 mm.

Mummy-brown, wings sepia-coloured, light markings faint.
—*Frontal callus mummy-brown, or dark sepia; dorsum of thorax with narrow yellowish grey stripes; dorsum of abdomen unicolorous, without spots, but with extreme hind margins of segments chrome-yellow; front and hind femora and middle and hind tibiæ and tarsi dark seal-brown, middle femora chocolate-brown or russet-brown, darker at tips, front tibiæ and tarsi clove-brown, a single band on front tibiæ close to base, two bands on middle and hind tibiæ, first joint of middle tarsi except tip and basal half of first joint of hind tarsi buff or cream-buff, lower band on hind tibiæ less distinct and narrower than upper.*

Head: front, face, and jowls yellowish grey, face and jowls clothed with pale yellowish hair, a large dark brown roughly triangular median blotch on vertex, most distinct when viewed from above or at a low angle from below; frontal callus moderately deep, extending from eye to eye, lower margin straight, upper margin convex or angulate; a conspicuous clove-brown median spot below callus; lateral frontal spots dark seal-brown, conspicuous, in contact with eyes, when viewed from above each surrounded by a buff-yellow ring, median frontal spot distinct, in contact with apex of vertical blotch; palpi buff, terminal joint elongate, blunt at tip, clothed on outer side with black and on under side of base with yellowish hair, basal joint clothed with yellowish hair; first and second joints of antennæ ochraceous-buff, clothed above and on outer side with short black hair, first joint viewed from above expanding from base to middle,

then slightly contracting again, viewed from the side expanding from base almost to tip, upper angle of second joint moderately produced, third joint elongate and tapering, dark brown, basal third dull ochraceous-rufous, last three annuli clove-brown. *Thorax*: dorsum with usual three stripes yellowish grey, median stripe very narrow, admedian stripes interrupted beyond expansions behind transverse suture, but with broader continuations projecting forward from crescentic grey marks on high margin; pectus, pleuræ, and sides of dorsum yellowish grey; tip of *scutellum* smoke-grey. *Abdomen*: second segment paler above; venter yellowish grey, clothed with short appressed yellowish hair. *Wings*: usual three rosettes distinct though faint, each rosette consisting of a single series of marks; sinuous light mark at apex very indistinct, sometimes almost obsolete, extending from below tip of second longitudinal vein to lower branch of third vein, but almost obliterated in second submarginal cell, continued as a series of detached oblique marks across posterior cells, faint light marks sometimes present on hind margin in distal angles of some of the posterior cells; upper portion of rosette round fork of third longitudinal vein extending to costa, sometimes appearing as a small subquadrate light spot at distal end of stigma; discal cell with two light marks across middle, but without light marks at extremities; rosette round tips of basal cells incomplete above and below, its proximal border continued into a zigzag mark running down to hind margin of wing; first basal cell with a transverse light mark just before middle, second basal cell with a similar mark at end of basal third; axillary cell with a semicircular light mark cutting off basal angle; *stigma* mummy-brown or dark brown, elongate, and clearly defined; alula uniformly sepia-coloured. *Halteres* cream-buff, knob brownish at base above and below. *Legs*: front tibiæ scarcely incrassate, hind tibiæ not incrassate.

Uganda: three specimens (co-types) from Buddu, November 1902 (*Dr. C. Christy*).

Hæmatopota inornata is most nearly allied to *H. ugandæ*, Ricardo (*Ann. & Mag. Nat. Hist.* ser. 7, vol. xviii. 1906, p. 105), another Uganda species, from which it may be distinguished *inter alia* by the absence of a dark brown median stripe on the abdomen, by the rosettes on the wings not having lighter centres, and by the absence of a distinct light mark below the costa at the proximal end of the stigma.

Hæmatopota malefica, sp. n.

♀.—Length (2 specimens) 10 mm.; width of head 3·75 to 4 mm.; width of front at vertex 1 mm.; length of wing 10 mm.

Mummy-brown, thorax darker, wings dark brown.—*Frontal callus mummy-brown; first joint of antennæ incrassate, cylindrical; dorsum of thorax with three grey stripes of usual type; scutellum grey, with a pair of admedian dark brown blotches at base; hind margins of abdominal segments narrowly greyish buff, dorsum of fourth and following segments with a pair of admedian yellowish grey spots at base; roseites in wings distinct, each consisting of a single series of light marks; legs as in foregoing species, but lower band on hind tibiæ sometimes obsolete or indistinct.*

*Head yellowish grey; frontal callus of moderate depth, extending from eye to eye, lower margin straight, upper margin rising to a slight angle in centre; a conspicuous clove-brown median spot below callus; lateral frontal spots dark seal-brown, conspicuous, in contact with eyes, median frontal spot present but not very distinct, a narrow light grey median stripe extending from it to vertex, separating two elongate brown blotches; palpi cream-buff, clothed with hair as in foregoing species, terminal joint elongate; first and second joints of antennæ russet-brown, clothed with black hair, upper angle of second joint strongly produced, third joint dark brown, lighter at base, of moderate breadth and tapering, last three annuli clove-brown. Thorax: pectus, pleuræ, and sides of dorsum smoke-grey. Abdomen: greyish buff hind margin of dorsum of second segment sometimes expanded into a median triangle; venter greyish buff, clothed with minute appressed yellowish hairs. Wings as in foregoing species, but light markings, especially series of oblique marks running across posterior cells, showing a tendency to become broken up into spots; sinuous light mark at apex sometimes more distinct, at least as regards its upper portion; light mark at proximal end of stigma distinct and extending to costa; stigma dark mummy-brown, strongly marked, shorter than in *H. inornata*. Halteres buff, knob brown or brownish at base above and below.*

Nyasaland Protectorate: type and one other specimen from Zomba Plateau (*Sir Alfred Sharpe, K.C.M.G., C.B.*).

In coloration and *facies* the present species is very similar to *H. inornata*, from which, apart from its considerably smaller size, it may be distinguished by the first joint of the antennæ being uniformly swollen almost from the extreme

base, instead of regularly expanding from the base towards the tip, by the third joint being broader at the base and less elongate, and by various differences in the wings, such as the shorter stigma, more distinct light mark at the proximal extremity of the latter, wider opening in the upper margin of the distal rosette, and shorter appendix to the fork of the third longitudinal vein.

Hæmatopota mactans, sp. n.

♀.—Length (8 specimens) 9·6 to 11·5 mm.; width of head 3 to 3·6 mm.; width of front at vertex 1 mm. to just over 1 mm.; length of wing 8 to 9·3 mm.

Seal-brown to clove-brown; dorsum of thorax with smoke-grey markings, scutellum, except a broad hind border (sometimes interrupted in middle line), smoke-grey; dorsum of abdomen with hind margins of all segments and a median stripe on second to sixth segments inclusive drab-grey or smoke-grey, fourth and following segments each with a pair of narrow elongate grey spots extending backwards from front margin but not reaching hind margin; wings mouse-grey, light markings milky, apical sinuous mark bifurcate, stigma dark brown, very conspicuous; legs clove-brown or seal-brown, middle femora except tips lighter, a single band on front tibiæ, two bands on middle and hind tibiæ, and basal half or two-thirds of first joint of middle and hind tarsi cream or cream-buff.

Head: front, face, and jowls smoke-grey, a narrow dark brown or clove-brown interrupted cross-band on upper part of face beneath antennæ; frontal callus mummy-brown, of median depth, extending from eye to eye, upper and lower margins straight; a small seal-brown A-shaped median mark below callus; median as well as lateral frontal spots conspicuous, clove-brown, lateral spots in contact with eyes; some yellowish-white hairs below each lateral spot, curving downwards over callus; palpi isabella-coloured, terminal joint sometimes blackish towards tip on outer side, moderately expanded at base, where it is clothed on outer side with rather long pale yellowish hair, clothed elsewhere on outer side with short black hairs; antennæ dark brown, first joint greyish pollinose, paler on inner side at base, and sometimes entirely or almost entirely ochraceous-buff, incrassate (elongate oval when viewed from above), with a well-marked constriction before tip when viewed from outer side, second joint with upper angle moderately produced, third joint of moderate breadth, tapering but not markedly elongate, paler

at extreme base, last three annuli clove-brown. *Thorax*: grey markings on dorsum of usual type, median stripe narrow as far as transverse suture, broader behind, where it appears as a process directed forwards from between inner ends of grey crescentic marks on hind margin, admedian stripes narrow, terminating on each side in a grey triangle behind transverse suture; pectus, pleuræ, and sides of dorsum smoke-grey. *Abdomen*: median stripe on dorsum of second segment broader than that on other segments, in the shape of a triangle with apex directed forwards, not or scarcely reaching front margin; sides of dorsum and venter smoke-grey, clothed with short appressed silvery hairs, ventral surface of third to seventh segments inclusive with a broad clove-brown median blotch clothed with black hair, the blotches together forming a median longitudinal stripe, which is interrupted by the pale hind margins of the segments. *Wings*: extreme base, first and second costal cells, and third costal and marginal cells as far as commencement of stigma milky; rosette round distal extremities of basal cells strongly marked though irregular, with a process from its inner border extending as a zigzag light mark across anal and axillary cells down to hind margin of wing; a large milky blotch occupying distal extremities of axillary and anal cells; a light spot in extreme basal angle of axillary cell, in front of which is an *angulate light mark*, with apex of angle directed away from base of wing; rosettes round fork of third longitudinal vein and distal extremity of discal cell small and often much broken up; against a light background base of upper branch of third vein appears infuscated; *stigma* rather short; dark quadrate blotch below stigma not diminishing in width until it reaches first posterior cell; at distal end of stigma a small, more or less complete, semi-quadrate milky loop or elongate curved mark next costa, its proximal extremity continuous below with proximal border of distal rosette; outer ramus of apical sinuous mark sometimes very faintly marked; a series of larger or smaller, more or less conspicuous milky blotches on hind margin, occupying distal angles of first, second, third, and fifth posterior cells; usual series of detached oblique light marks across posterior cells more or less confluent with marginal blotches; discal cell with proximal extremity, a transverse mark at end of proximal third (sometimes connected with proximal extremity), two small spots (sometimes connected) at commencement of distal fourth, and in some cases a small fleck beyond these milky; first basal cell with base and a transverse mark just before middle, second basal cell with

base and a transverse mark at end of proximal third milky. *Halteres* cream-coloured, knob sometimes brownish at base above and below. *Legs*: front tibiæ slightly incrassate.

Mozambique, Nyasaland Protectorate, Uganda, Somaliland: type from Wadelai, Nile Province, Uganda, 24. xi. 1904 (*Captain E. D. W. Greig, I.M.S.*); a second specimen from Uganda (*Captain Greig*); one specimen from Somaliland (*Th. Greenfield*); two specimens from Katumbe, N. Nyasa, Nyasaland Protectorate, 6. xii. 1906, and three from Blantyre District, Nyasaland Protectorate, May 1905 (*Dr. J. E. S. Old*). Dr. Old's field-note to one of his specimens from Katumbe is as follows:—"Caught biting cattle: country swampy jungle, with very tall coarse reeds and forest with low trees. Only game seen were bushbuck, waterbuck, and warthog; old spoor of eland plentiful, as also that of buffalo some months old." Through the courtesy of Mons. J. R. M. Surcouf, I have been enabled to examine a series of specimens of this species in the collection of the Muséum d'Histoire Naturelle, Paris, including examples from Mozambique, 1905 (*G. Vasse*), and the bed of the Dakato R., S. Harrar, Ogaden, Somaliland, June 1901 (*Dr. E. Brumpt*).

To judge from Loew's figure ('*Dipteren-Fauna Süd-afrika's*, 1860, taf. i. fig. 26), the pattern of the light markings in the wing of *H. recurrens*, Lw., from Natal, is similar to that exhibited by the present species, although in the former case the rosettes are much less broken up. The degree of affinity between *H. meteorica*, Corti (Somaliland), and *H. mactans* cannot be determined without making an examination of the type of the former, since the wing-markings in this species have not been described or figured; it would appear from Corti's description, however, that *all* the tibiæ in *H. meteorica* have two pale bands. From *H. pulchrithorax*, Austen, *H. mactans* can be distinguished, apart from all other characters, by the much narrower basal portion of the third joint of the antennæ, as well as by the absence of any trace of a second pale band on the front tibiæ.

Hematopota stimulans, sp. n.

♀—Length (4 specimens) 8·6 to 11 mm.; width of head 3 to 3·5 mm.; width of front at vertex 1 mm. to just over 1 mm.; length of wing 8·2 to 9·4 mm.

Dark brown; dorsum of thorax darker than abdomen, with three narrow longitudinal stripes and usual pair of crescentic marks on hind margin smoke-grey; scutellum smoke-grey, with

a roughly triangular brown blotch on each side at base ; dorsum of abdomen with hind borders of all segments, and on second and following segments, as far as sixth segment inclusive, a median stripe and pair of admedian spots drab-grey or smoke-grey, seventh segment with spots but without median stripe ; wings light sepia-coloured, light markings milky, sharply defined though rather coarse, rosettes well-marked, apical sinuous mark indistinctly bifurcate ; legs clove-brown or dark seal-brown, middle femora except tips lighter, a single band on front tibiæ near base, two bands on middle and hind tibiæ, first joint of middle and hind tarsi except tip, and bases of next three joints buff or cream-buff, band on front tibiæ narrow.

Head yellowish grey ; frontal callus mummy-brown, narrow, extending from eye to eye, partly divided in middle line by a triangle of yellowish pollinose ground-colour which descends from front, upper margin of callus curved, extremities of callus slightly tapering ; a distinct dark seal-brown median spot below callus ; face with a more or less distinct dark streak on each side, near lower inner margin of each eye, and a very distinct small round black spot below each antenna ; lateral frontal spots clove-brown, conspicuous, not in contact with eyes, median frontal spot small or indistinct ; palpi isabella-coloured, terminal joint rather narrow, elongate, blunt at tip, clothed on outer side with black hair ; first joint of antennæ brownish buff, scarcely swollen, clothed like second joint with black hair, second joint ochraceous buff, its upper angle moderately produced, third joint seal-brown, lighter at base, moderately elongate, last three annuli clove-brown. Thorax : three grey stripes on dorsum of usual type, very slender and parallel to each other, median stripe continuous or practically so, admedian stripes more or less indistinct after triangular expansions beyond transverse suture ; pectus, pleuræ, and sides of dorsum smoke-grey. Abdomen : dorsum with hind borders of segments clothed with yellowish hairs, sides of segments smoke-grey ; venter smoke-grey, clothed with short, appressed, yellowish hairs, a broad dark brown median stripe, interrupted on hind borders of segments, extending from third or fourth segment to tip. Wings : extreme base semi-hyaline ; alula with a pale border all round ; in axillary cell, light loop round proximal angle connected by a broad mark, along or close to hind margin, with extremity of zigzag downward process from proximal rosette ; apical sinuous mark broader at its upper extremity, immediately below tip of second longitudinal vein ; beyond apical sinuous mark two more or less distinct light spots in second submarginal cell just before tip of wing,

representing an incomplete outer branch of apical sinuous mark; a series of usually large and conspicuous light blotches on hind margin in distal angles of all posterior cells (or all except fourth posterior cell), with an additional blotch on distal extremity of sixth longitudinal vein, occupying tips of axillary and anal cells, and proximal marginal angle of fifth posterior cell; usual series of detached oblique light marks across posterior cells distinct; central portion of middle and distal rosettes usually occupied by a series of light spots, surrounding distal extremity of discal cell and fork of third longitudinal vein respectively; *stigma* seal-brown, of moderate length, at its proximal extremity a conspicuous light mark, formed by an upward extension from proximal rosette to costa; discal cell with two transverse light marks, which are sometimes approximate, in its median portion, and a larger or smaller light spot or crescentic mark near its distal extremity, sometimes also with a minute light fleck in its proximal extremity; markings of basal cells as in foregoing species; first costal cell and second costal cell as far as pale mark before *stigma* lightly infuscated. *Halteres* cream-buff, knob seal-brown at base above and below. *Legs*: front tibiæ not or scarcely incrassate, pale band not broader than broadest bands on middle and hind tibiæ; middle tibiæ sometimes buff at extreme base.

Nyasaland Protectorate, 1907 (*Dr. J. E. S. Old*).

In *facies* and markings this species resembles the South African *Hæmatopota ruficornis*, Walk., from which, however, it can at once be distinguished by the much less deep frontal callus, the narrowness of the band on the front tibiæ, and the dark stripe on the venter; from the following species, to which it is also similar in *facies*, *H. stimulans* may be distinguished, *inter alia*, by the shape of the frontal callus, the presence of a distinct median stripe on the dorsum of the majority of the abdominal segments and the smaller size of the admedian spots, and above all by the broad light bar connecting the loop and zigzag mark in the axillary cell.

Hæmatopota insidiatrix, sp. n.

♀.—Length (5 specimens) 8·4 to 10·5 mm.; width of head 3 to 3·6 mm.; width of front at vertex 1 to 1·4 mm.; length of wing 8 to 9·6 mm.

Dark mummy-brown; dorsum of thorax with narrow, longitudinal, smoke-grey stripes, dorsum of abdomen with a double series of large smoke-grey or drab-grey rounded spots; thorax and scutellum as in foregoing species; dorsum of abdomen

with hind borders of segments drab-grey or greyish cream-buff, second to sixth segments inclusive each with an ill-defined smoke-grey median stripe, sometimes indistinct or obsolete on segments after the second; wings light sepia-coloured, pale markings similar in pattern to those in wings of foregoing species but less coarse, and loop and zigzag mark in axillary cell not connected; legs as in foregoing species.

Head: front drab-grey, vertical region with a more or less distinct sub-triangular brown mark on each side of median line, which is occupied by a narrow grey stripe running from median frontal spot to margin of occiput; face and jowls smoke-grey, area between lower inner margin of eye and antenna on each side generally more or less dotted with mummy-brown, or exhibiting commencement of a horizontal dark brown streak, below each antenna a small dark brown fleck, usually less conspicuous than in foregoing species; *frontal callus* mummy-brown, rather narrow from above downwards, extending from eye to eye, upper margin straight or nearly so, not indented in middle line; a well-marked seal-brown median spot below callus; median as well as lateral clove-brown frontal spots present, latter in contact with or narrowly separated from eyes; *palpi* as in foregoing species, except that terminal joint on outer side, in addition to its covering of black hair, is clothed, chiefly at base and below, with pale yellowish hair; first and second joints of *antennæ* greyish fawn-coloured, clothed with black hair, first joint slightly swollen on inner side, third joint hazel or mummy-brown, moderately elongate, last three annuli dark brown. *Abdomen*: admedian grey spots on dorsal surface of first six segments, sometimes so large as to be confluent and appear as a pair of broad admedian longitudinal grey stripes; venter as in foregoing species, dark median stripe extending from base to tip. *Wings*: light markings sharply defined, except indistinct pale mark in second submarginal cell, beyond apical sinuous mark; light blotches on hind margin smaller than in foregoing species, and usually no light blotch in fourth posterior cell; *stigma* and light mark before it as in previous species; light markings in discal cell as in foregoing species. *Halteres* as in foregoing species. *Legs*: front tibiæ, in addition to pale band near base, with some pale yellowish hairs in or below middle, representing a rudimentary or vestigial second pale band.

Nyasaland Protectorate: twenty-four miles from Blantyre, 22. i. 1905, 6.0 to 7.0 A.M. (*Dr. J. E. S. Old*). The collector's field-note to this species is the same as that to his specimens

of *H. pertinens*, Austen, taken at the same place and time:—
“In tall green reeds; bit myself and native servant; usually silent and very sluggish.”

Hematopota insidiatrix closely resembles the foregoing species (*q. v.* for distinctive characters).

Hematopota noxialis, sp. n.

♀.—Length (7 specimens) 8.6 to 11 mm.; width of head 3 to 3.8 mm.; width of front at vertex 1.2 to 1.4 mm.; length of wing 8 to 10 mm.

Dark brown; thorax with smoke-grey markings as in *H. stimulans*; dorsum of abdomen with hind borders of segments greyish cream-buff, and two admedian rows of large smoke-grey spots, but with no median grey stripe; wings pale mouse-grey, the infuscation uniform throughout, light markings faint though distinct, usual three rosettes and apical sinuous mark present, each rosette composed almost entirely of a single series of lines; legs as in *H. stimulans*, except that pale band on front tibiae is much broader than bands on middle and hind tibiae, and middle femora are not or scarcely darker at tips.

Head: front yellowish grey, face and jowls smoke-grey, sometimes a brownish mark on each side of face running inwards from lower inner margin of eye, but no conspicuous dark spot or fleck below each antenna; frontal callus cinnamon- or raw umber-coloured, of moderate depth, extending from eye to eye, lower margin straight, upper margin generally slightly concave on each side of middle line; dark median spot below callus absent or very small; median as well as lateral clove-brown frontal spots present, latter usually not in contact with eyes; palpi as in *H. insidiatrix*; first and second joints of antennae greyish cinnamon-coloured, clothed with black hair, first joint short, more or less incrassate on inner side, third joint russet-brown, last three annuli darker, sometimes clove-brown, basal portion of third joint moderately elongate and tapering. Thorax: pectus, pleurae, and sides of dorsum smoke-grey. Abdomen: dorsum with sides of segments smoke-grey, and admedian spots extending from second to seventh segments inclusive; venter as in *H. stimulans*. Wings: light markings not coarse; no light blotches along hind margin, but usual series of detached oblique marks across posterior cells present; loop and zigzag mark in axillary cell not connected; markings in discal cell usually confined to two light marks across its median portion, but occasionally a third light fleck faintly indicated near its distal extremity; stigma seal-brown, its proximal extremity

occupied by an upward prolongation from proximal rosette. *Halteres* as in *H. stimulans*.

Nyasaland Protectorate: type and five other specimens from the Blantyre District, May 1905 (*Dr. J. E. S. Old*); an additional specimen forwarded in 1905 by *Major F. B. Pearce*, with the following note: "Especially virulent species: complained of by natives as injuring, if not actually killing their cattle."

In *facies*, conspicuously spotted abdomen, and the faint colour and markings of the wings, *H. noxialis* agrees with *H. brunnescens*, Ricardo, a species which is common in Uganda, but also occurs in the Nyasaland Protectorate; the new species, however, is distinguished by the shape of the antennæ, and by the absence of a broad mummy-brown bar between the eye and antenna on each side, and of a median grey stripe on the dorsal surface of the abdominal segments. From both *H. stimulans* and *H. insidiatrix* the present species is distinguished at once by the breadth of the pale band on the front tibiæ; while it differs from *H. malefica*, apart from the paleness of the wings and other characters, in the wing-markings being much less broken up, the broader front, much shorter first antennal joint, shallower frontal callus, &c.

Hæmatopota furtiva, sp. n.

♀.—Length (4 specimens) 9 to 9.4 mm.; width of head 3 to 3.2 mm.; width of front at vertex just over 1 mm.; length of wing 8 mm.

Dark olive-brown; markings of dorsum of thorax and abdomen olive-grey, as in H. stimulans, Austen, though median stripe on abdominal segments usually broader, and admedian spots generally larger; wings sepia-coloured, light markings closely resembling those exhibited by the wings of H. stimulans, except that loop and zigzag mark in axillary cell are not connected; legs as in H. stimulans, except that middle and hind femora are paler (buff-coloured), that band on front tibiæ is paler (cream-coloured) and slightly broader, and that distal two-thirds of front tibiæ are distinctly swollen.

Head: front yellowish grey, its sides nearly parallel, face and jowls smoke-grey; frontal callus clove-brown or black, about 0.5 mm. in depth, extending from eye to eye, upper and lower margins straight or nearly so, though upper margin sometimes apparently curves slightly downwards at sides; a dark seal-brown median spot below and in contact with callus; lateral frontal clove-brown spots rather small,

not in contact with eyes, roughly triangular in shape, with their apices pointing downwards and inwards, median frontal spot small, but usually distinct; *palpi* greyish buff or isabella-coloured, terminal joint elongate, blunt at tip, but little expanded at base, clothed on outer side with black hairs, pale hairs confined to under side of first and under side of base of second joint; first and second joints of *antennæ* buff-yellow or orange-buff, clothed with black hair, third joint ochraceous-buff, rather small, terminal annulus clove-brown, first joint of antennæ not incrassate, though its inner margin seen from above is slightly convex, third joint narrow, but little wider at base. *Thorax*: median grey stripe on dorsum continuous, very narrow; pectus, pleuræ, and sides of dorsum smoke-grey; *scutellum* smoke-grey, with a more or less distinct dark brown blotch on each basal angle. *Abdomen*: olive-grey spots on dorsum large, roughly circular; venter grey, with a broad clove-brown median stripe except at base, hind margins of segments narrowly cream-buff. *Wings*: apical sinuous mark usually somewhat broader at its upper extremity, immediately below end of second longitudinal vein, indistinctly bifurcate as in *H. stimulans*, or at least the lower of the two light spots beyond it present in the second submarginal cell; discal cell with two transverse light marks, and also usually with a light spot at or near each extremity; *stigma* similar to that in wing of *H. stimulans*, but paler and slightly shorter. *Halteres* as in *H. stimulans*.

Nyasaland Protectorate, 1907 (*Dr. J. E. S. Old*).

A fifth specimen from the Nyasaland Protectorate (*Dr. Old*), probably taken at the same time and place as the foregoing, differs from the typical form in having the frontal callus slightly shallower, owing to its upper margin curving downwards somewhat on each side; since in other respects the specimen agrees with the type it would seem reasonable to suppose that the difference in the shape of the callus is an individual one, and that the specimen really belongs to the present species. Care is necessary to distinguish *H. furtiva* from *H. stimulans*, which it closely resembles in *facies*, but as distinctive characters in the case of the present species it will suffice to note that the frontal callus is clove-brown or black instead of mummy-brown, that it is considerably deeper, does not as a rule taper towards the sides, and is not partly divided in the middle line; that the third joint of the antennæ is ochraceous-buff instead of seal-brown (clove-brown in the case of the last three annuli), and is also rather small; and that in the wing the light loop and zigzag

mark in the axillary cell are not connected by a light bar running parallel to the margin of the anal angle.

Hæmatopota nociva, sp. n.

♀.—Length (2 specimens) 8·4 to 8·8 mm.; width of head 2·8 mm.; width of front at vertex 1 mm.; length of wing 7·5 mm.

Dark olive-brown or dark sepia-coloured, dorsum of thorax and abdomen with smoke-grey or drab-grey markings, as in *H. furtiva*, Austen; frontal callus raw umber-coloured or mummy-brown, of moderate depth, extending from eye to eye; antennæ coloured as in *H. furtiva*, but first joint strongly incrassate in middle; coloration and markings of wings and legs as in *H. furtiva*, except that light wing-markings are slightly less coarse, and that stigma is darker seal-brown and somewhat longer; front tibiæ, except basal third, incrassate.

Agreeing with *H. furtiva*, Austen, in practically every respect, except as already indicated and as follows:—lateral frontal spots larger; terminal joint of palpi clothed above with rather long and fine brownish hair; first joint of antennæ seen from above strongly incrassate in middle (inner margin strongly convex), tapering again towards tip.

Nyasaland Protectorate: one specimen (type) taken in 1907 (Dr. J. E. S. Old); a second specimen from Zomba Plateau (Sir Alfred Sharpe, K.C.M.G., C.B.).

Hæmatopota nocens, sp. n.

♀.—Length (2 specimens) 8·6 mm.; width of head 3 mm.; width of front at vertex 1·2 mm.; length of wing 8·2 to 8·6 mm.

Dark-brown; dorsum of thorax with three practically entire smoke-grey stripes; dorsum of abdomen clothed with short appressed pale yellow hairs, markings of dorsum as in *H. stimulans*, Austen, but yellowish-grey and first segment also with a pair of grey spots or blotches connected with basal angles; frontal callus clove-brown, extending from eye to eye, and deeper towards each side; coloration and markings of wings as in *H. noxialis*, Austen, except that light mark at proximal end of stigma is somewhat more distinct; legs as in *H. furtiva*, Austen, except that pale band on front tibiæ is somewhat less sharply marked, and that distal portion of front tibiæ is scarcely or not at all swollen.

Head: front yellowish-grey, face and jowls smoke-grey, a more or less distinct trace of a mummy-brown mark between antenna and lower inner margin of eye on each

side; *frontal callus* fairly deep on each side, narrowing towards middle line, where it is distinctly constricted; dark seal-brown median spot below callus present; *lateral frontal clove-brown spots* small, widely separated from eyes, median frontal spot very small or obsolete; *palpi* isabella-coloured, terminal joint moderately slender, thickly clothed on outside with black hairs, and with some pale yellowish hairs on under side of basal half; *antennæ* russet-brown, terminal annulus of third joint darker, first joint somewhat short, slightly swollen, with convex inner margin when viewed from above, third joint only slightly expanded towards base. *Thorax*: pleuræ, pectus, and sides of dorsum smoke-grey; *scutellum* smoke-grey, with a dark brown blotch on each side. *Abdomen*: venter as in *H. stimulans*, Austen. *Halteres* as in *H. stimulans*.

Nyasaland Protectorate, 1907 (*Tr. J. E. S. Old*).

Care is necessary in order not to confuse *H. nocens* with one or other of the two foregoing species, to both of which it presents a superficial resemblance, although from both it may be distinguished by the finer and less complex light markings of the wings; other points of difference from *H. furtiva* are furnished by the shape of the frontal callus, and the browner and more incrassate first joint of the antennæ; from *H. nociva* the present species may further be distinguished by the shape and coloration of the frontal callus and first joint of the antennæ; from *H. noxialis*, Austen, which, as already stated, it closely resembles in the coloration and markings of the wings, *H. nocens* may be distinguished, *inter alia*, by the coloration and shape of the frontal callus, and the presence of a median stripe on the dorsum of all the abdominal segments except the first and last.

XIV.—Remarks on the Hymenopterous Genus *Tiphia*.

By ROWLAND E. TURNER, F.Z.S., F.E.S.

ASHMEAD (Canadian Entomologist, 1900 and 1903) forms a family Tiphidæ to include the genera *Tiphia*, *Paratiphia*, *Epomidiopteris*, *Pterombrus*, and *Engycystus*. While agreeing with him as to the points distinguishing the group from the true Scoliidæ being of more than generic importance, I do not think he is justified in making more than a subfamily for it. I also differ from him in his remarks on *Pterombrus* and *Engycystus*. The differences which he gives between